

CURRENT MEASUREMENT PROBES

SR SERIES CURRENT PROBES



SR600 SERIES

Current probes well-suited for power applications where high accuracy and low phase shift is important



SR601

FEATURES

- Measurement range of 100 mA to 1200 A_{AC}
- Large jaw opening accommodates up to two 500 kcmil conductors
- Ergonomic design and easy operation
- Low phase shift for power measurements
- Available with mA or mV output signals
- Designed for DMMs, recorders, loggers, oscilloscopes, power and harmonic meters
- UL approved

ACCESSORIES

CAT. #1017.45

4 mm Banana plug adapter
(Safety Leads to non-recessed plug)

CAT. #2118.46

Banana (Female) BNC (Male) adapter

MODELS	SR601	SR604	SR651	SR661
ELECTRICAL				
Nominal Range	1000 A _{AC}		1000 A _{AC}	(10, 100, 1000) A _{AC}
Measurement Range	(0.1 to 1200) A _{AC}			
Transformation Ratio	1000: 1		Voltage output	
Output Signal	1 mA/A (1 A _{AC} @ 1000 A)		1 mV/A (1 V _{AC} @ 1000 A)	100 mV; 10 mV; 1 mV/A (1 V _{AC} @ 10, 100; 1000 A)
Phase Shift		10 A: 3° 50 A: 1.5° 200 A: 0.75° 1000 A: 0.5° 1200 A: 0.5°		(10 A Range) 10 A: ≤ 15° (100 A Range) 20 A: ≤ 15° 100 A: ≤ 10° 120 A: ≤ 5° (1000 A Range) 200 A: ≤ 3° 1000 A: ≤ 2° 1200 A: ≤ 1°
Overload	1200 A for 15 min ON, 30 min OFF			
Frequency Range	30 Hz to 5 kHz*		10 Hz to 100 kHz*	
Load Impedance	5 Ω max		100 kΩ min	1 MΩ min
Working / Common Mode Voltage	600 V CAT III			
Output Surge Protection	30 V peak		N / A	
Output Termination	(2) 4 mm safety banana jacks	Lead with plugs	(2) 4 mm safety banana jacks	6.5 ft (2 m) coaxial cable with BNC terminal
MECHANICAL				
Jaw Opening	2.25 in (57 mm) max			
Maximum Conductor Size	2.05 in (52 mm)			
Maximum Bus Bar Size	(1) (1.95 x 0.19) in (50 x 5) mm			
Dimensions	(4.37 x 8.50 x 1.77) in (111 x 216 x 45) mm			
Weight	1.21 lb (550 g)			
Material	Polycarbonate UL 94			
ENVIRONMENTAL				
Operating Temperature	(14 to 122) °F (-10 to 50) °C			
Storage Temperature	(-4 to 158)°F (-20 to 70) °C			
Operating Relative Humidity	(0 to 85) % RH decreasing linearly above 95 °F (35 °C)			
SAFETY				
Electrical	EN 61010-2-32, 600 V CAT III			
UL Approval	Yes - United States and Canada			

Consult factory for NIST Calibration prices.

*Current derating above 1 kHz using the formula: 1000 A x 1/F (in kHz)

CAT. #	DESCRIPTION
2113.43	AC Current Probe Model SR601 (1000 A, 1 mA/A, Jack) L**
2113.44	AC Current Probe Model SR604 (1000 A, 1 mA/A, Lead) L**
2113.45	AC Current Probe Model SR651 (1000 A, 1 mV/A, Jack)
2113.49	AC Current Probe Model SR661 (10 A, 100 mV/A; 100 A, 10 mV/A & 1000 A, 1 mV/A, BNC)

**L - Limited open Voltage Output



CURRENT MEASUREMENT PROBES

GENERAL PURPOSE PROBES SELECTION CHART

Series	Model	Ratio	Measurement Range		Output Signal		Phase Shift**	Maximum Conductor Size		Output Connection	CAT. #
			AC	DC	Current	Voltage		Ø Cable	Bus Bar		
	MN01	1000:1	(2 to 150) A	–	1 mA/A*	–	N / A	0.39 in (10 mm)	N / A	Leads	2129.17
	MN02	1000:1	50 mA to 100 A 50 mA to 90 A	–	1 mA/A*	–	N / A	0.39 in (10 mm)	N / A	Leads	2129.20
	MN05	–	5 mA to 10 A (1 to 100) A	–	–	1 mV/mA 1 mV/A	N / A	0.39 in (10 mm)	N / A	Leads	2129.19
	MN09	–	(1 to 150) A	–	–	100 mV _{DC} / A _{AC}	N / A	0.39 in (10 mm)	N / A	Leads	2129.21
	MN114	–	1 mA to 10 A	–	–	100 mV/A	< 8 °	0.47 in (12 mm)	N / A	Leads	2110.71
	MN185	1000:1	50 mA to 120 A	–	1 mA/A	–	< 3.5 °	0.47 in (12 mm)	N / A	Jacks	100.185
	MN255	–	(0.1 to 24) A (0.1 to 240) A	–	–	100 mV/A 10 mV/A	< 2.5 °	0.78 in (20 mm)	N / A	Leads	2115.81
	MN261	–	(0.1 to 24) A (0.5 to 240) A	–	–	100 mV/A 10 mV/A	< 6 °	0.78 in (20 mm)	N / A	BNC	2115.82
	MN291	–	(0.5 to 240) A	–	–	100 mV _{DC} / A _{AC}	N / A	0.78 in (20 mm)	N / A	Leads	2115.84
	MN307	–	10 mA to 12 A	–	–	100 mV/A	< 2.5 °	0.78 in (20 mm)	N / A	Leads	2116.23
	MN312	1000:1	(0.1 to 200) A	–	1 mA/A*	–	< 2.5 °	0.78 in (20 mm)	N / A	Jacks	2116.24
	MN352	–	(0.1 to 150) A	–	–	10 mV/A	< 2.5 °	0.78 in (20 mm)	N / A	Jacks	2116.26
	MN353	–	(0.1 to 150) A	–	–	10 mV/A	< 2.5 °	0.78 in (20 mm)	N / A	Leads	2116.27
	MN373	–	(0.01 to 2.4) A (0.1 to 200) A	–	–	1000 mV/A 10 mV/A	< 3 °	0.78 in (20 mm)	N / A	Leads	2116.28
	MN375	–	(0.1 to 10) A	–	–	100 mV/A	< 1.5 °	0.78 in (20 mm)	N / A	Leads	2115.41
	MN379	–	5 mA to 6 A (0.1 to 120) A	–	–	200 mV/A 10 mV/A	< 4 °	0.78 in (20 mm)	N / A	Leads	2153.01
	MN379T	–	5 mA to 6 A (0.1 to 120) A	–	–	200 mV/A 10 mV/A	< 4 °	0.78 in (20 mm)	N / A	Lead w / BNC	2153.02
	SL206	–	10 mA to 1.5 A 50 mA to 60 A	10 mA to 2 A 50 mA to 80 A	–	1 mV/mA _{AC/DC} 10 mV/A _{AC/DC}	< 1 °	0.46 in (12 mm)	N / A	Leads	1201.45
	MD301	1000:1	(2 to 500) A	–	–	1 mV _{DC} / A _{AC}	N / A	1.18 in (30 mm) (2 x 500) kcmil	(2.48 x 0.20) in (63 x 5) mm	Leads	1201.07
	MD305	1000:1	(1 to 600) A	–	1 mA/A	–	< 1 °	1.18 in (30 mm) (2 x 500) kcmil	(2.48 x 0.20) in (63 x 5) mm	Leads	1201.36

*Output protection for open secondary.

**Phase shift indicated at maximum rating.

Note: Models MN103, MN114 and MN185 are not CE compliant. MN200 & MN300 series are UL approved except MN379.

Consult factory for NIST Calibration price.

CURRENT MEASUREMENT PROBES

GENERAL PURPOSE PROBES SELECTION CHART

SERIES	MODEL	RATIO	MEASUREMENT RANGE		OUTPUT SIGNAL		PHASE SHIFT**	MAXIMUM CONDUCTOR SIZE		OUTPUT CONNECTION	CAT. #
			AC	DC	CURRENT	VOLTAGE		Ø CABLE	BUS BAR		
	MR415	—	(0.5 to 400) A	(0.5 to 600) A	—	1 mV/A	≤ 1.5 °	1.18 in (30 mm)	2 bus bar (1.24 x 0.39) in (31 x 10) mm	5 ft (1.5 m) Lead	1200.80
	MR416	—	(0.5 to 40) A (0.5 to 400) A	(0.5 to 60) A (0.5 to 600) A	—	10 mV/A 1 mV/A	≤ 2.2 ° ≤ 1.5 °	1.53 in (39 mm)	2 bus bar (1.95 x 0.19) in (50 x 5) mm	5 ft (1.5 m) Lead	1200.82
	MR526	—	(0.5 to 100) A (0.5 to 1000) A	(0.5 to 150) A (0.5 to 1400) A	—	10 mV/A 1 mV/A	≤ 2 ° ≤ 1.5 °	1.53 in (39 mm)	2 bus bar (1.95 x 0.19) in (50 x 5) mm	5 ft (1.5 m) Lead	1200.83
	SR601	1000:1	(0.1 to 1200) A	—	1 mA/A*	—	< 0.5 °	2.05 in (52 mm)	(1.95 x 0.19) in (50 x 5) mm	Jacks	2113.43
	SR604	1000:1	(0.1 to 1200) A	—	1 mA/A*	—	< 0.5 °	2.05 in (52 mm)	(1.95 x 0.19) in (50 x 5) mm	Leads	2113.44
	SR651	—	(0.1 to 1200) A	—	—	1 mV/A	< 0.5 °	2.05 in (52 mm)	(1.95 x 0.19) in (50 x 5) mm	Jacks	2113.45
	SR701	1000:1	1 mA to 1000 A	—	1 mA/A*	—	< 0.7 °	2.05 in (52 mm)	(1.95 x 0.19) in (50 x 5) mm	Jacks	2116.29
	SR704	1000:1	1 mA to 1000 A	—	1 mA/A*	—	< 0.7 °	2.05 in (52 mm)	(1.95 x 0.19) in (50 x 5) mm	Leads	2116.30
	SR752	—	(0.1 to 1000) A	—	—	1 mV/A	< 0.7 °	2.05 in (52 mm)	(1.95 x 0.19) in (50 x 5) mm	Leads	2116.32
	SR759	—	1 mA to 1 A 10 mA to 10 A (0.1 to 100) A (1 to 1000) A	—	—	1000 mV/A 100 mV/A 10 mV/A 1 mV/A	< 1 °	2.05 in (52 mm)	(1.95 x 0.19) in (50 x 5) mm	Leads	2116.33
	K100	—	0.1 mA to 3 A	0.05 mA to ± 4.5 A	—	1 mV/mA	N / A	0.18 in (4.5 mm)	N / A	Plugs	1200.67
	K110	—	(0.1 to 300) mA	(0.05 to ± 450) mA	—	10 mV/mA	N / A	0.18 in (4.5 mm)	N / A	Plugs	2111.73
	LM102	1000:1	50 mA to 200 A	—	1 mA/A*	—	< 3 °	0.63 in (16 mm)	N / A	Leads	2153.04
	LM103	—	(0.1 to 200) A	—	—	1 mV/A	< 3 °	0.63 in (16 mm)	N / A	Leads	2153.05

*Output Protection for open secondary.

**Phase shift indicated at maximum rating.

Note: All SR probes listed on this chart are UL approved, however not all SR series probes are UL approved; please consult factory.

Consult factory for NIST Calibration price.

OUTPUT TERMINATIONS

Lead with BNC

Insulated 6.5 ft (2 m) coaxial cable with insulated BNC connector rated 600 Vrms



Jacks

Two standard safety banana jacks (4 mm)



Leads

Double/reinforced 5 ft (1.5 m) leads with 4 mm safety banana plug







Shrouded Banana Plugs

Two 4 mm safety banana plugs; standard ¾ in (19 mm) spacing









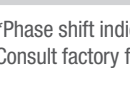
CURRENT MEASUREMENT PROBES

AMPFLEX® AND MINIFLEX® PROBES - SELECTION CHARTS

SERIES	MODEL	RATIO	MEASUREMENT RANGE	OUTPUT SIGNAL	MAXIMUM CONDUCTOR SIZE	CAT. #
	MF 300-10-2-10-HF	–	(30 / 300) A	100 mV/A, 10 mV/A	2.95 in (75 mm)	2126.84
	MF 3000-14-1-1-HF	–	3000 A	1 mV/A	3.93 in (100 mm)	2126.86
	MA114	–	(3 / 30 / 300 / 3000) A	1 mV/mA, 100 mV/A 10 mV/A, 1 mV/A	4 in (101 mm)	2153.41
	300-24-2-10	–	(30 / 300) A	100 mV/A, 10 mV/A	7.48 in (190 mm)	2112.88
	1000-24-1-1	–	1000 A	1 mV/A	7.48 in (190 mm)	2112.39
	1000-24-2-1	–	(100 / 1000) A	10 mV/A, 1 mV/A	7.48 in (190 mm)	2112.98
	1000-36-2-1	–	(100 / 1000) A	10 mV/A, 1 mV/A	11 in (280 mm)	2113.00
	3000-24-1-1	–	3000 A	1 mV/A	7.48 in (190 mm)	2112.46
	3000-36-1-1	–	3000 A	1 mV/A	11 in (280 mm)	2112.48
	3000-24-2-1	–	(300 / 3000) A	10 mV/A, 1 mV/A	7.48 in (190 mm)	2113.05
	3000-48-2-1	–	(300 / 3000) A	10 mV/A, 1 mV/A	15 in (381 mm)	2112.01
	6000-36-2-0.1	–	(600 / 6000) A	1 mV/A, 0.1 mV/A	11 in (280 mm)	2113.21
	30000-24-2-0.1	–	(3000 / 30,000) A	1 mV/A, 0.1 mV/A	7.48 in (190 mm)	2113.33
	24-3001	–	300 A / 3000 A _{AC}	10 mV/A, 1 mV/A	7.48 in (190 mm)	2120.81

Consult factory for NIST Calibration price.

OSCILLOSCOPE & BNC TERMINATED PROBES

MODEL	MEASUREMENT RANGE		OUTPUT SIGNAL VOLTAGE	PHASE SHIFT*	MAXIMUM CONDUCTOR SIZE		OUTPUT CONNECTION
	AC	DC			Ø CABLE	BUS BAR	
 SL261	100 mA to 10 A (1 to 100) A		100 mV/A 10 mV/A	< 1.5 °	0.46 in (12 mm)	N / A	6.5 ft (2 m) Lead w / BNC
 MN261	(0.1 to 24) A (0.5 to 240) A	–	100 mV/A 10 mV/A	< 2.5 °	0.78 in (20 mm)	N / A	6.5 ft (2 m) Lead w / BNC
 SR661	(0.1 to 12) A (0.1 to 120) A (1 to 1200) A	–	100 mV/A 10 mV/A 1 mV/A	< 1 °	2.05 in (52 mm)	(1.96 x 0.19) in (50 x 5) mm	6.5 ft (2 m) Lead w / BNC
 MN251T MN379T	(0.5 to 240) A	–	1 mV/A	≤ 2.5 °	0.78 in (20 mm)	(0.78 x 0.19) in (20 x 5) mm	10 ft (3 m) Lead w / BNC
	(0.005 to 6) A (0.1 to 120) A	–	200 mV/A 10 mV/A	≤ 4 ° ≤ 2.2 °	0.78 in (20 mm)	(0.78 x 0.19) in (20 x 5) mm	10 ft (3 m) Lead w / BNC
 MH60	(0.5 to 100) A	(0.5 to 100) A	10 mV/A	< 1 °	1.02 in (26 mm)	N / A	6.6 ft (2 m) Lead w / BNC
 MR417	(0.5 to 40) A (0.5 to 400) A	(0.5 to 60) A (0.5 to 600) A	10 mV/A 1 mV/A	≤ 2.2 ° ≤ 1.5 °	1.18 in (30 mm)	2 bus bar (1.24 x 0.39) in (32 x 10) mm	6.6 ft (2 m) Lead w / BNC
 MR527	(0.5 to 100) A (0.5 to 1000) A	(0.5 to 150) A (0.5 to 1400) A	10 mV/A 1 mV/A	≤ 2.2 ° ≤ 1.5 °	1.53 in (39 mm)	2 bus bar (1.96 x 0.19) in (50 x 5) mm	6.6 ft (2 m) Lead w / BNC

*Phase shift indicated at maximum rating. Note: All probes are rated 600 V CAT III and CE compliant. Not all models are UL approved; please consult factory. Consult factory for NIST Calibration price.